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PROGRESS REPORT

FOR

SEPTEMBER 1956

ON

ROCKET EVALUATION

50X1

DOC <u>80</u>	REV DATE <u>29 MAY 1980</u>	BY <u>018313</u>
ORIG COMP <u>56</u>	ORIG <u>56</u>	TYPE <u>03</u>
ORIG CLASS <u>S</u>	PAGES <u>2</u>	REV CLASS <u>C</u>
JUST <u>22</u>	NEXT REV <u>2010</u>	AUTH: NN 10-2

1210-C-23a

November 2, 1956

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Since this program began during the latter part of September, the work done during this month was of a preliminary nature.

Several units were disassembled and engineering drawings and photographs were made of the component parts. These drawings and photographs will be included in the final report. The propellant was analyzed chemically by passing warm carbon disulfide through a weighed portion of the sample and noting the loss in weight. This process showed a sulfur content of 9.4 per cent. The nitrate content was found to be 75.0% by passing warm water through the remainder of the sample. The residue was carbon, amounting to 15.6 per cent.

Static tests were conducted at a temperature of 70 Deg. F. The average burning time of the propellant was 5.4 seconds. The time from the completion of burning to the bursting of the expulsion charge was an average of 5.6 seconds. This meant a total time from the instant of ignition to the release of the payload of 11.0 seconds. Fuse igniters were also tested at 70 Deg. F. These were found to burn an average of 90 seconds before flashing.

Additional static tests were conducted at 10 Deg. F. The performance of these units was similar to that of the units tested at 70 Deg. F. In order to determine the lowest safe operating temperature, another group of units was conditioned at -18 Deg. F. When fired at this temperature, the units exploded. Fuse igniters fired at this temperature burned for 100 seconds before flashing.

#### Future Work

Additional static tests are scheduled to determine the highest safe operating temperature in order to find the temperature range of these units. When this is completed, 150 flight tests will be made in three groups: 50 at the lowest safe operating temperature, 50 at 70 Deg. F and the remaining 50 at the upper safe operating temperature.

#### Financial Statement

Total Amount of Contract

Obligations for September, 1956

Total Obligations to September 30, 1956

Balance of Contract

Expiration Date - November 18, 1956

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